

THE DE KOCK COMMISSION REPORT: A MONETARIST PERSPECTIVE†

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THERE IS MUCH IN THE DE KOCK COMMISSION REPORT and in the De Kock reforms to encourage a monetarist. With monetarists, the Report shares a deep dissatisfaction with the recent history of monetary policy practice in South Africa. For a monetarist, the advocacy in the Report of market forces for the efficient allocation of credit and the case made for a market in foreign exchange represent a major advance in official thinking. Furthermore, a monetarist could find little fault with the explanation in the Report of inflation as a monetary phenomenon:

The Commission views monetary and fiscal policies designed to control the money supply and aggregate monetary demand as the essence of anti-inflationary strategy. Indeed, its inquiry has led it to the firm conclusion that the only effective way to restore and maintain reasonable stability of the price level in South Africa is to exert better control over money creation and total spending, with full acceptance of the

† *The Final Report of the Commission of Inquiry into the Monetary System and Monetary Policy in South Africa*. RP/70/1984. Hereafter referred to as the Report.

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implications this will have for interest rates and exchange rates (Main Findings: Para 138, pp. A25-A26).

Nevertheless there are fundamental differences between a monetarist's prescription for South African monetary policy and the solutions proposed by the De Kock Commission. The monetarist argues for rules to bind economic policies, particularly rules for money supply growth. The Commission argues for discretion for the Reserve Bank over interest rates, exchange rates, exchange control and money supply. The Report makes the case for Reserve Bank freedom from political interference with interest rates and exchange rates. The 'market-oriented' interest rates argued for in the Report are not market-determined rates in the usual sense of that term. What is recommended is that all interest rates be closely aligned with those short-term interest rates controlled directly by the Reserve Bank through its more or less continuous interaction with the money market, banks and the discount houses.

The Report therefore is not a monetarist document. It should rather be understood as a testament for modern discretionary central banking. Modern central bankers regard the supply

of money as important, as they do other instruments of control. Accordingly, the case for rules rather than discretion for policy is nowhere seriously addressed in the Report.

The main purpose of this discussion is to indicate precisely why it will not be possible for the South African Reserve Bank to exercise the management discretion proposed for it in the Report and to control money supply closely in the interests of economic stability, as the commission would wish. A proper recognition of such difficulties would surely have led the commissioners to different conclusions about the appropriate structure of the South African financial system. In particular, moves towards what are described in the Report as an American-type relationship between the central bank and the money market, rather than the London-type or 'classical' arrangement prevailing in South Africa, might have commended themselves (paras 17.59 and 17.60).

THE CASE FOR A MONEY SUPPLY RULE

It would perhaps be helpful if the monetarist case for money supply rules were briefly stated here. The case for controlling money supply rests upon the existence of empirically reliable links between money supply changes and changes in spending. Money is one of the arguments in the expenditure functions of economic actors. Monetarists argue that more money held and owned will mean more spending and more spending

will, in turn, bring higher prices. Money is a component of wealth and changes in money have effects on wealth which, in turn, influence spending. It should, however, be recognized that it is money and not credit that constitutes part of individual wealth. For every domestic financial credit there is a domestic debit. Domestic financial credits and debits cancel out. Or in other words, for every borrower there is a lender, for every investor, a saver. Foreign credits may facilitate more domestic spending; however, foreign credits also represent domestic liabilities that have to be repaid. They clearly do not represent wealth but are a charge on it.

Recognizing the distinction between money and credit is vital for the purposes of understanding money supply causes and effects. Monetarists argue that changes in the nominal supply of money, which are equivalent to changes in nominal wealth, need to be controlled in the interest of controlling spending. Excess supplies of money, in particular excess supplies of what is described in the literature as 'outside money', that is to say money unencumbered by repayment schedules or interest commitments, lead to additional spending. Outside money is the non-interest-bearing debt of the government sector, i.e. the notes and deposits supplied by the central bank which form a part of individual wealth. Outside money is more usually described as high-powered money or the money base. Interest-

bearing government debt will not be a component of wealth, unless taxpayers fail fully to discount the future interest payments on government debt.

When the present value of interest payments on government debt is regarded by taxpayers as equal to the value of government debt newly issued on their behalf, then so-called Ricardian equivalence holds. That is to say, under Ricardian equivalence, financing government expenditure through debt issues is no more stimulatory of private spending than financing such expenditure through taxation (Barro, 1974). Nor will bank deposits be a component of net wealth unless the issuers of these deposits, the shareholders of the banks, disregard such liabilities.

A full explanation of why money and not debt is important as an influence on spending is provided by Don Patinkin in his scholarly *Money, Interest and Prices* (Patinkin, 1965). Patinkin (1972) has also considered the wealth effects of banking. These issues are further considered below.

The case for a money supply rule rather than money supply discretion is based upon what would now be understood as a Rational Expectations view of the world. The argument may be briefly stated as follows: If the expectations of economic actors are rational then actual money supply or any other policy actions taken by the authorities do not have real effects. It is only the difference between actual and expected money supply devel-

opments that will affect the real economy. Expected money supply developments will have been incorporated into decisions to produce, consume, hire labour, borrow or lend capital, buy or sell foreign exchange, etc. Thus expected money supply is fully reflected in the prevailing structure of wages, prices, interest and exchange rates. Unexpected changes in money will affect these prices and so the real economy. However, given rational expectations, there is no justification for unexpected action by the authorities. The system will stabilize itself at a full employment equilibrium. Unexpected action by the authorities simply adds uncertainties about policy to the uncertainties of nature with which economic actors have to cope, and about which the economic authorities will not have superior information.

It is therefore best if the authorities act predictably to minimize uncertainty. This is the case for a money supply rule. Furthermore, since low inflation implies lower information costs about relative prices than does higher inflation, since high inflation will be expected and so will not stimulate economic activity, and because inflation is a monetary phenomenon, the money supply rule should be consistent with very low rates of inflation in the long term. That is to say, money supply should be made to grow at a rate that will satisfy additional demands for money arising from real activities so that inflationary or de-

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affect the real money supply. It has been incorporated into the production, borrowing or lending of foreign exchange, and the money supply is revailing structural interest and expected changes in the prices and so on. However, given the current rate there is no justification by the authorities to stabilize the money market equilibrium by the authorities. The uncertainties of economic actors are not to be taken into account.

The authorities minimize uncertainty for a money market, since low information is better than high inflation. It will not stimulate because inflation is a phenomenon, could be controlled by the authorities. Inflation is not to say, money to grow at a rate. Additional demand from real money or de-

The De Kock Commission Report: A Monetarist Perspective

flationary pressure will not emanate from the money market (Kantor, 1979).

THE CASE AGAINST DIRECT CONTROLS

As is well known, the central bank may not wish to control the supply of money at all. It may prefer to manage interest rates without regard to the money supply. In such circumstances, given the chosen structure of interest rates, changes in money supply become a function of changes in demands for bank credit, which will in turn be dependent on the state of the economy or inflationary expectations. The essential monetarist argument is that money supply need not be made dependent on the state of the economy and that it will become so dependent only if the authorities prefer it that way. The logical corollary of money supply policies that are independent of demands for credit is market determined interest and exchange rates. Thus excess demands for or supply of bank credit, given the supply of high-powered money, will mean higher or lower interest rates combined with a currency that is expected to depreciate or appreciate as the case may be.

If the money supply is made dependent upon demands for bank credit, then one method the authorities may use to restrain credit demands, other than to increase interest rates, would be to impose direct controls on the demands for and supplies of bank credit. Direct controls on demands for credit and on deposit and

other interest rates were very much a feature of monetary policy in South Africa before the De Kock reforms. The Commission is strongly opposed to such controls and proposes its own 'market-oriented' policies for money supply control as an alternative. The justification that the Commission advances for market-oriented policies is summarized as follows:

43. There are two fundamental reasons for this conclusion: The first is the Commission's finding that, by promoting the efficient allocation of resources and performing a number of other vital economic functions, the various sophisticated financial markets which have developed in South Africa make an important contribution in their own right to general economic growth and welfare. Moreover, they function best in the national interest if they are reasonably free, competitive, active and broad, and produce realistic market-related interest and exchange rates. It is important, therefore, that monetary policy should, as far as possible, be pursued in a manner which does not undermine the efficient functioning of these markets (Report, p. A9).

44. The second main reason is that the Commission firmly believes that such a market-oriented approach can to a large extent overcome the main deficiencies from which monetary policy has suffered in the past. Specifically, it should contribute to (1) the moderation and stabilization of the growth of the monetary aggregates; (2) more effective control over disintermediation and other velocity-related developments; (3) the maintenance of realistic and market-related interest rates;

and (4) the attainment of realistic and market-related spot and forward exchange rates. In these ways it should greatly improve the ability of the monetary authorities to influence aggregate monetary demand (Report, p. A9).

Avoiding direct controls will, it is agreed, mean more efficient financial markets and hence lower real costs of investment and higher real rewards for savers out of a better allocation of loanable funds. The efficiency argument against direct controls is overwhelmingly strong. One can agree with the Commission that it is possible to control money supply, and so aggregate demand, without direct controls. What is doubtful is the ability of the Reserve Bank to control the money supply in the manner suggested by the Commission. In this respect a money supply rule is preferable to discretionary control.

INTERMEDIATION,
DISINTERMEDIATION AND
REINTERMEDIATION

The views of the Commission on disintermediation and other velocity-related developments cannot be accepted without reservation (par. 44, Main Findings, p. A9). It would appear that the analysis of the Commission was influenced by the fallacy that credit demand (and therefore debits) are important for their own sake as an influence on spending rather than as potential determinants of the supply of money.

Clearly the imposition and then the relaxation of direct controls will influ-

ence movements of funds from and to the balance sheets of banks and will therefore influence the monetary aggregates, as is explained in Chapter 9 of the Report. Such movements complicate the interpretation of reported money supply developments, or in other words, M1, M2 or M3 may be less reliable as indications of the directional effects of money supply policies. Clearly also, if the actual money supply that influences spending is different from the money supply recorded in the books of the banking system, then 'money' may matter less or more than the economy-watchers, including the Reserve Bank, believe. In other words, the velocity of 'money' as defined may be unreliable as a basis for economic forecasting or management. It is the apparent instability of measured velocity or of the demand for money that has made the Commission reluctant to commit itself to a specific money supply aggregate to manage.

The case for controlling the supply of money rests squarely on the stability, that is the predictability, of the demand for money or its reciprocal, the velocity of circulation of money. As indicated above, the money properly included in the expenditure function is outside money, being a component of wealth. Monetary theory suggests that it is changes in demand for and supply of non-interest bearing notes and deposits issued by the central bank (high-powered money) that is the relevant monetary aggregate. Of

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The De Kock Commission Report: A Monetarist Perspective

course, other monetary aggregates will be dependent upon the supply and demand for high-powered money.

Reintermediation, intermediation, and disintermediation, which are the results of the evolution of the financial system or influenced by the imposition or removal of direct controls, may change the relationship between high-powered money and other 'monies' and between the different monies and expenditure. Nevertheless, in principle, disintermediation and reintermediation can only affect spending through their effects on wealth. The supply of credit, including the supply of bank credit, as indicated previously, is not a component of wealth. Thus the impact of a reintermediation or disintermediation on spending may be much less important than the Commission believes.

The case against direct controls is best made on grounds of the efficiency losses incurred through them. The distortions of monetary statistics may be less important for spending than the Commission believes. Nevertheless, the Commission is perfectly correct to warn against naive interpretations of money supply statistics. That is why a highly visible, high-powered-money supply rule is preferable. Changes in high-powered money supplied to the system indicate unambiguously the influence of the authorities on the financial system. If the supply of high-powered money were well controlled, changes in the

financial structure could be safely left alone.

THE IMPORTANCE OF MONEY

What is required to establish the importance of high-powered money for South Africa is a monetary policy experiment. That is to say, the Reserve Bank could control high-powered money according to some rule quite independently of the state of the credit market or the economy, and the outcomes for economic activity could be observed. Conclusive evidence will, however, require an initial act of faith. Evidence of the relationship between 'money' and expenditure taken from a system where the supply of money has been made to respond to the state of the economy through official intervention may not be convincing.

Unfortunately the De Kock Commission recommendations are not going to provide us with such an experiment. The discretion the Reserve Bank will exercise over money supply will complicate any efforts to discover whether money supply changes were the cause or the effect of changes in economic activity.

Incidentally, it is not at all obvious that the relevant velocities of circulation of money are as unpredictable as the Report implies. Certainly, expenditure velocities of circulation of money have declined recently but such declines would not necessarily have been unexpected.

Money, as has been mentioned, is an argument in the expenditure func-

tion. Money affects expenditure which, in turn, influences output. Gross domestic expenditure and output are not, however, identities. The difference between GDE and GDP is the trade balance. Exports and so output may be affected by foreign demands, which are independent of domestic monetary policies. Therefore it is the relationship between money and expenditure, or the expenditure velocities, that are of importance for the South African monetary authorities; and so it is the stability of expenditure velocities and not output velocities that will determine the importance of money in South Africa.

in high-powered money, defined as currency plus required reserves of the banking system, and changes in gross domestic expenditure over different time periods, was analysed by way of regression analysis, using the Almon lag procedure. As may be seen below, high-powered money has been and remains important in explaining gross domestic expenditure in South Africa. The equation tested was

$$GDE = \text{Constant} + \sum_{i=0}^3 M_{t-i}$$

Fourth percentage changes of gross domestic expenditure (*GDE*) and high-powered money (*M*) were used

Table 1 *Changes in High-Powered Money and Gross Domestic Expenditure in South Africa. Estimates of the Parameters of the Equation**

M_0	1969 I-1984 IV	1980 II-1984 IV
Constant	9,7446 (6,53653)	11,65285 (5,42453)
M_{t_0}	0,49210 (3,9101)	0,48477 (3,3267)
M_{t_1}	0,22053 (2,9810)	0,14847 (1,76805)
M_{t_2}	-0,17177 (-1,0364)	-0,2357 (-1,19592)
M_{t_3}	-0,04191 (-0,26023)	0,10544 (0,55546)
ΣM_i	0,49896 (5,4495)	0,50298 (5,0642)
\bar{R}^2	0,45198	0,64565

* The author wishes to thank Mr G. Toms, Graduate Assistant, University of Cape Town, who was responsible for the calculation of the figures.

This point is conceded by the Commission, but none the less it is the output velocities that receive closest attention in the Report (Chap. 15, especially n. 4, p. 158. See also Barr and Kantor, 1982).

The relationship between changes

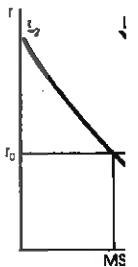
to avoid seasonal factors. An Almon polynomial was applied with both end points constrained. The t statistics appear in parentheses after the coefficients.

Clearly it can be concluded that high-powered money has been and re-

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MONEY SUPPLY CONTROL: THE
PROBLEM WITH AN INTEREST RATE
TARGET IN AN OPEN ECONOMY
WITHOUT A DEVELOPED FOREIGN
EXCHANGE MARKET

The conventional approach to the difficulties of using interest rates as a target for money supply control purposes concludes that the authorities have to be able to estimate the demand for money. The point is well illustrated with the help of the following diagram.

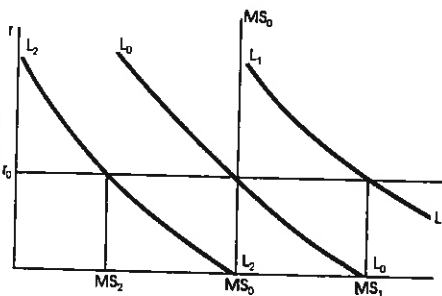


Fig. 1

The objective of monetary policy is a money supply level MS_0 . If the authorities are to achieve this objective by means of an interest rate target, they have to be able to predict the demand for money. In Fig. 1, if demand for money is expected to be L_0 , an interest rate target r_0 will prove successful for the purposes of satisfying the money supply objective. However, if demand for money is unexpectedly

¹ For an earlier application of this method see Barr and Kantor, 1982.

high at L_1 , money supply inadvertently will increase to MS_1 . Alternatively, if money demand is unexpectedly low, money supply will fall unintentionally to MS_2 .

The monetarists' argument is in favour of ignoring interest rates and concentrating upon a target for high-powered money. The high-powered target is preferred to the non-borrowing reserve target because it gives fewer opportunities for banks to influence money supply via accommodation from the central bank. In general the less interest-elastic the demand for reserves, or in cases where accommodation is available, the less interest-elastic the banks' demands for borrowed reserves, the closer will be the links between the high-powered money targets and the supply of money. Interest elasticity of demand for notes is another potential point of

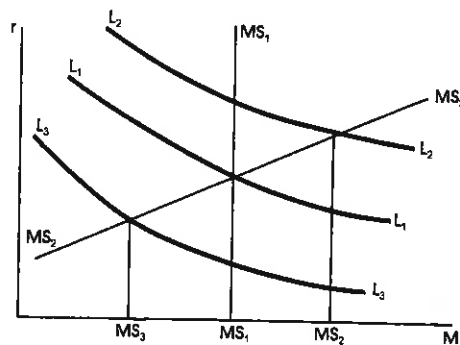


Fig. 2

slippage (Thornton, 1982). The importance of the interest-elasticity of the money supply under base targeting can be illustrated in Fig. 2.

As may be seen, the more interest-elastic the money supply, the more dependent will money supply be on changes in demand for money. L_1 , L_2 and L_3 represent shifts in money demand, and MS_1 and MS_2 inelastic and elastic money supply functions, respectively.

The conventional approach uses only one market, the money market, and one interest rate, the money market rate, to illustrate the issue. Allowing for a further market, viz. the market for bank credit, can reveal how much more complicated is the task of controlling money supply via interest rate targeting in practice. The importance of disaggregating the money and credit markets has been central to the monetary analysis of the pioneering monetarists, Karl Brunner and Allen H. Meltzer (1968, 1974). The problems are further compounded when credit and money markets are open to capital inflows and outflows.

These complexities can be demonstrated by widening the conventional model to include explicitly equations for the supply and demand for bank credit and solving the two equation models for money supply and the bank credit or overdraft rate. The credit and money market model includes, as an additional dependent variable, the bank overdraft rate. This model is surely much more representative of the money supply process in South Africa and provides a much better insight into the difficulties of money supply control, given interest

and exchange rate targeting, than the simple money market model illustrated above.

For the purposes of simplicity, a linear model of the money and credit supply process is presented. The model is introduced by two simplified balance sheets, one for the Reserve Bank and one for the commercial banking system, as follows:

	RESERVE BANK		
Notes	N	Foreign Assets	FA
Bank Deposits	CR	Government securities	GS
Government Deposits	GD	Loans & advances to commercial banks	BR
	COMMERCIAL BANKS		
Deposits	D	Cash Reserves	CR
Accommodation from Res. Bank	BR	Government securities	LA
Time deposits	T	Private securities	OD

THE MODEL

Identities and definitions

- (1) NDA (net domestic assets) = $GS - GD$
- (2) HPM (high powered money) = $N + CR$
- (3) M (money supply) = $N + D$
- (4) $N = nM$

where n is the proportion of notes in the money supply.

Behavioural Equations

The foreign exchange reserve position of the Reserve Bank is represented as

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$$(5) \quad FA = FA_1 rm + FA_2 r^*$$

with $FA_1 > 0$ and $FA_2 < 0$

where rm is the money market interest rate in South Africa, and r^* is the effective cost of offshore borrowing. As indicated by the signs on the partial derivatives of the variables, an increase in the money market rates will improve the balance of payments and increase the foreign reserves held by the Bank while an increase in the effective cost of offshore finance will cause outflows of capital or smaller inflows and a loss of reserves.

r^* is defined as equal to the exogenously determined offshore interest rates (r_o) plus or minus the expected changes in the dollar value of the rand, i.e.:

$$(6) \quad r^* = r_o + e$$

and where

$$(6') \quad e = (SR^e - SR)/SR$$

SR^e is the greater of the spot rate expected by the market and the forward rate quoted by the Reserve Bank (measured in rands per dollar). If the quoted forward rate exceeds the spot rate expected by the market, then borrowers will cover forward. If the forward rate quoted by the Reserve Bank is less than the expected spot rate, then a greater proportion of offshore borrowing will be uncovered (Barr & Kantor, 1984). r^* is assumed to be exogenous to the model.

In a well-developed foreign exchange market, which would include a

well-developed market for forward exchange, market forces would simultaneously establish spot and forward exchange rates and short term interest rates. The forward rate by definition would be the spot rate of exchange expected in, say, three months time. Interest parity would hold; that is, the cost of local and offshore borrowing, after adjusting for differences between spot and forward rates of exchange, would be expected to be the same. Furthermore, in well-developed money and exchange markets, changes in expectations about the future value of the currency cause adjustments to interest and exchange rates without influencing the supply of foreign exchange reserves held by the central bank. In other words, unless the central bank intervenes, the exchange and money markets equalize the demands for and supplies of foreign exchange and the balance of payments will not influence the money supply. Clearly, this is not the case in South Africa, where a well-developed forward market in foreign exchange has not yet been developed despite some encouragement from the De Kock Commission. The Reserve Bank provides forward exchange at a rate that is consistent with its interest rate and foreign exchange reserve objectives. Unless the Reserve Bank wishes to augment its foreign exchange reserves, such rates will be set to avoid opportunities for profitable arbitrage that would be available if interest differentials were greater than the effec-

tive cost of forward cover. However, such forward (as quoted) rates may and are often not regarded as equalizing the expected costs of offshore and onshore finance. Offshore borrowers or lenders, importers or exporters do not necessarily cover against the risk of changes in the foreign exchange value of the rand. The supply of foreign exchange reserves held by the Reserve Bank and therefore the high-powered money supply may change accordingly. Such possibilities are reflected in equation (5) (Barr & Kantor, 1984; Part II of the Report, Chapters 11 and 12).

The demands for money function takes the usual form

$$(7) \quad Md = L_1rm + L_2Y$$

with $L_1 < 0$ and $L_2 > 0$

where Md is money demand and Y the exogenously determined level of economic activity.

The supply of money function is represented as a multiple of the sources of high-powered money, as follows, where

$$(8) \quad M = g[FA + NDA + BR]$$

and where g is the money multiplier (Kantor, 1982).

NDA , the open market position of the Reserve Bank, is regarded as exogenously determined. Equation (8) also reflects the fact that the banking system is continuously indebted to the Reserve Bank and borrowed reserves (BR) may be regarded as a permanent source of high-powered money. BR is

referred to in South Africa as the money market 'shortage'.

The demand for accommodation by the banks from the Reserve Bank (BR) is written as

$$(9) \quad BR = Br_1rOd + Br_2rm$$

with $Br_1 > 0$ and $Br_2 < 0$

where rOd is the overdraft or bank credit rate.

Thus the banks are assumed to borrow more from the Reserve Bank as the level of overdraft rates rises. The overdraft rate indicates the return to bank lending. The money market rate, rm , is regarded as reflecting the opportunity cost of borrowing reserves. The discount rate of the Reserve Bank will approximate the money market rate. Other things being equal, including the overdraft rate, the higher the returns in the money market or the higher the cost of borrowing reserves, the less inclined will the banks be to borrow. Clearly the willingness of banks to borrow reserves depends upon the difference between the costs of borrowing and the rewards for lending. Irrespective of the level of rates, any gap between the bank lending and borrowing rates will encourage the banks to borrow additional reserves from the Reserve Bank.

However, it should be understood that higher lending rates charged by the banking system, again with other things equal, including inflation and inflationary expectations, imply greater credit risks to be assumed by the banks. Therefore, even if the cus-

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 risks of default. It is interest rates and
 credit-worthiness that determine the
 supply of bank credit. The influence

$$(12) \quad L_1 r_m + L_2 = g [FA_1 r_m + FA_2 r^* + NDA + BR_1 r_{Od} + BR_2 r_m]$$

of risks of default is not included
 specifically in the supply of bank
 credit function of the model. In equa-

$$(13) \quad LA + OD_1 r^* + OD_2 r_{Od} = b [FA_1 r_m + FA_2 r^* + NDA + BR_1 r_{Od} + BR_2 r_m - nM]$$

tion (11) below the supply of bank
 credit is simply regarded as a multiple
 of the reserves held by the banks.

The demand for bank credit func-
 tion of the private sector (Od) is de-
 scribed as

$$(10) \quad OD = OD_1 r^* + OD_2 r_{Od} \text{ with } OD_1 > 0 \text{ and } OD_2 < 0$$

The demand of the government sector
 for bank credit (LA) is regarded as de-
 termined independently of interest
 rates.

The supply of bank credit may be
 described as

$$(11) \quad BC = b \cdot CR$$

$$(14) \quad r_{OD} = \frac{L_1 r_m + L_2 \bar{Y}}{g BR_1} - \frac{1}{BR_1} FA_1 r_m + FA_2 r^* + NDA + BR_2 r_m$$

where *b* is the credit supply multi-
 plier.

SOLUTION OF THE MODEL

Equilibrium Conditions

In the money market the demand
 for money is made equal to the supply
 of money, $Md = M$ and by substitu-
 tion

Equilibrium in the credit market is de-
 fined as $OD + LA = BC$ and by substitu-
 tion

(Note: $CR = FA + NDA + B - nM$,
 from the Reserve Bank's balance
 sheet.)

The problems facing the Reserve
 Bank in its desire to control both
 short-term interest rates and the sup-
 ply of money can be demonstrated by
 assuming that r_m , the money market
 rate, is determined exogenously by
 Reserve Bank intervention. The
 model then reduces to a system with
 two dependent variables, the over-
 draft rate r_{OD} , and the supply of
 money, M , and is solved as follows:

and

$$(15) \quad M = -\frac{1}{nh} (LA + OD_1 r^*) - OD_2 [r_{OD}] + h FA_1 r_m + FA_2 r^* + NDA \\ + BR_2 r_m + h [r_{OD}]$$

In order to achieve money supply objectives, the authorities would not only have to be able to estimate the income elasticity of demand for money, and at least all the other elasticities indicated in equations (14) and (15). This is clearly a most formidable task and one which might be judged to be beyond the capabilities of the Reserve Bank.

CONCLUSION

Applying the model has, it is hoped, revealed how difficult it would be for the South African Reserve Bank to control the supply of money by exercising its discretion over interest and exchange rates. The model also indicates how much easier it would be for the Reserve Bank to control interest rates and money supply if the exchange market were well developed and the balance of payments did not affect the supply of high-powered money. Regrettably, after the South African foreign debt crisis of 1985, the full development of the foreign ex-

change market has been interrupted and the influence of balance of payments flows on the money supply remains as important, or has perhaps become even more important, than it was before.

It is probable that the Reserve Bank, while enjoying the greater freedom recommended for it by the De Kock Commission Report, will continue to fail to make money supply growth a stabilizing force in the economy. Money supply growth rates are likely to continue to be too rapid in the upward phases of the business cycle and too slow in the downward phases, as experienced in 1984 and 1985. If so, the monetarists' hope is that the Report of the Commission may be an important waystation on the road to a money supply rule for South Africa. Their fear is that the revealed failures of discretionary-type policies would in due course lead to a greater reliance on direct controls.

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The De Kock Commission Report: A Monetarist Perspective

REFERENCES

- BARR, G. D. I. & KANTOR, B. S. (1984). 'Interest rates, the exchange rate and money supply in South Africa', *The Investment Analysts Journal*, No. 23, June, pp. 45-49.
- BARR, G. D. I. & KANTOR, B. S. (1982). 'Money and economic activity', *South African Journal of Economics*, Vol. 50 (4).
- BARRO, R. J. (1974). 'Are Government Bonds Net Wealth?', *Journal of Political Economy*, Vol. 83, December, pp. 1095-1118.
- BRUNNER, K. and MELTZER, A. (1968). 'Liquidity traps for money, bank credit and interest rates', *Journal of Political Economy*, 76, January, pp. 1-37.
- (1974). 'Money, debt and economic activity', *Journal of Political Economy*, 80, pp. 951-977.
- KANTOR, B. S. (1979). 'Rational expectations and economic thought', *Journal of Economic Literature*, Vol. XVII, No. 4, pp. 1422-1441.
- KANTOR, B. S. and REES, D. (1982). *South African Economic Issues*. Cape Town: Juta, Chapter 5, pp. 95-99.
- PATINKIN, DON (1965). *Money, Interest and Prices: An integration of Monetary and Value Theory* (2nd ed.). New York: Harper & Row. Esp. Chaps. II & IX.
- (1972). *Money and Wealth, Studies in Monetary Economics*. New York: Harper & Row, Chap. 9.
- THORNTON, D. L. (1982). 'Simple Analytics of the Money Supply Process and Monetary Control', *Federal Reserve Bank of St Louis Review*, October, Vol. 64, No. 8.